

What is claimed is:

1. A phone system, comprising:
  - a terminal unit comprising:
    - 5 a first antenna,
    - a first modem connected to said first antenna,
    - a second antenna,
    - a second modem connected to said second antenna,
    - a modem interface connected to said first modem and to said second
  - 10 modem;
  - wherein said first modem provides a first air interface using said first antenna for short range communication,
  - said second modem provides a second air interface using said second antenna, and
  - said second air interface is different than said first air interface.
- 15 2. The phone system of claim 1, wherein:
  - said modem interface provides signals from said first modem to said second modem and provides signals from said second modem to said first modem.
- 20 3. The phone system of claim 2, wherein:
  - said modem interface converts signals received from said first modem to first converted signals compatible with said second modem and provides said first converted signals to said second modem, and
  - said modem interface converts signals received from said second modem to second
  - 25 converted signals compatible with said first modem and provides said second converted signals to said first modem.
4. The phone system of claim 1, wherein:
  - said first air interface provides a cordless phone air interface.
- 30 5. The phone system of claim 1, wherein:
  - said second air interface provides a wireless local loop air interface.

6. The phone system of claim 1, wherein:  
said second air interface provides a cellular phone air interface.

7. The phone system of claim 1, wherein:  
5 said second air interface provides a PCS air interface.

8. The phone system of claim 1, further comprising:  
a handset comprising:  
a third antenna,  
10 a third modem connected to said third antenna,  
a handset user interface;  
wherein said third modem provides a third air interface using said third antenna,  
and  
said third air interface is the same as the first air interface such that the third  
15 modem can communicate with the first modem.

9. The phone system of claim 8, wherein:  
said handset further comprises:  
a handset command interface for processing commands received through  
20 said handset user interface.

10. The phone system of claim 9, wherein:  
said handset command interface processes commands received from said terminal  
unit.  
25

11. The phone system of claim 9, wherein:  
said terminal unit further comprises:  
a terminal command interface for processing commands received from said  
handset.  
30

12. The phone system of claim 1, wherein:  
said terminal unit further comprises:  
a terminal user interface.

13. The phone system of claim 12, wherein:

said terminal unit further comprises:

a terminal command interface for processing commands received through said terminal user interface.

5

14. The phone system of claim 13, wherein:

said terminal command interface processes commands received from said handset.

15. A method of wireless communication, comprising:

10 receiving a signal in a first air interface format from a wireless base station through a first antenna of a terminal unit;

converting said signal to a second air interface format; and

sending said signal in said second air interface format to a wireless handset through a second antenna of said terminal unit;

15 wherein said first air interface format is a wireless local loop air interface format, said second air interface format is a short range wireless air interface format, and said signal includes voice data.

16. The method of claim 15, wherein:

20 said first air interface provides a cellular phone air interface.

17. The method of claim 15, wherein:

said first air interface provides a PCS air interface.

25 18. The method of claim 15, wherein:

said second air interface format is a cordless phone air interface format.

19. The method of claim 15, further comprising:

30 sending a command signal in said second air interface format from said terminal unit to said handset through said second antenna.

20. The method of claim 15, further comprising:

receiving a command signal in said second air interface format at said terminal unit from said handset through said second antenna.

21. A method of wireless communication, comprising:

receiving a signal in a first air interface format from a wireless handset through a first antenna of a terminal unit;

5 converting said signal to a second air interface format; and

sending said signal in said second air interface format to a wireless base station through a second antenna of said terminal unit;

wherein said first air interface format is a short range wireless air interface format, said second air interface format is a wireless local loop air interface format, and  
10 said signal includes voice data.

22. The method of claim 21, wherein:

said first air interface format is a cordless phone air interface format.

15 23. The method of claim 21, wherein:

said second air interface provides a cellular phone air interface.

24. The method of claim 21, wherein:

said second air interface provides a PCS air interface.

20

25. The method of claim 21, further comprising:

sending a command signal in said first air interface format from said terminal unit to said handset through said second antenna.

25 26. The method of claim 21, further comprising:

receiving a command signal in said first air interface format at said terminal unit from said handset through said second antenna.

27. A method of wireless communication, comprising:

30 receiving a signal including a command in a first air interface format from a wireless handset through a first antenna of a terminal unit;

converting said signal to command data indicating said command; and  
executing said command at said terminal unit;

wherein said first air interface format is a short range wireless air interface format,

said second air interface format is a wireless local loop air interface format, and  
said terminal unit includes a second antenna for supporting a second air interface.

28. The method of claim 27, wherein:

5       said first air interface format is a cordless phone air interface format.

29. The method of claim 27, wherein:

said second air interface provides a cellular phone air interface.

10   30. The method of claim 27, wherein:

said second air interface provides a PCS air interface.

31. The method of claim 27, wherein:

executing said command includes using said second air interface.

15

32. A system for wireless communication, comprising:

means for receiving a signal in a first air interface format from a wireless base  
station through a first antenna of a terminal unit;

means for converting said signal to a second air interface format; and

20   means for sending said signal in said second air interface format to a wireless  
handset through a second antenna of said terminal unit;

wherein said first air interface format is a wireless local loop air interface format,  
said second air interface format is a short range wireless air interface format, and  
said signal includes voice data.

25

33. The system of claim 32, wherein:

said first air interface provides a cellular phone air interface.

34. The system of claim 32, wherein:

30   said first air interface provides a PCS air interface.

35. The system of claim 32, wherein:

said second air interface format is a cordless phone air interface format.

36. The system of claim 32, further comprising:

means for sending a command signal in said second air interface format from said terminal unit to said handset through said second antenna.

5 37. The system of claim 32, further comprising:

means for receiving a command signal in said second air interface format at said terminal unit from said handset through said second antenna.

38. A system for wireless communication, comprising:

10 means for receiving a signal in a first air interface format from a wireless handset through a first antenna of a terminal unit;

means for converting said signal to a second air interface format; and

means for sending said signal in said second air interface format to a wireless base station through a second antenna of said terminal unit;

15 wherein said first air interface format is a short range wireless air interface format, said second air interface format is a wireless local loop air interface format, and said signal includes voice data.

39. The system of claim 38, wherein:

20 said first air interface format is a cordless phone air interface format.

40. The system of claim 38, wherein:

said second air interface provides a cellular phone air interface.

25 41. The system of claim 38, wherein:

said second air interface provides a PCS air interface.

42. The system of claim 38, further comprising:

30 means for sending a command signal in said first air interface format from said terminal unit to said handset through said second antenna.

43. The system of claim 38, further comprising:

means for receiving a command signal in said first air interface format at said terminal unit from said handset through said second antenna.

44. A system for wireless communication, comprising:

means for receiving a signal including a command in a first air interface format from a wireless handset through a first antenna of a terminal unit;

5 means for converting said signal to command data indicating said command; and

means for executing said command at said terminal unit using a second air interface;

wherein said first air interface format is a short range wireless air interface format, and

10 said second air interface format is a wireless local loop air interface format.

45. The system of claim 44, wherein:

said first air interface format is a cordless phone air interface format.

15 46. The system of claim 44, wherein:

said second air interface provides a cellular phone air interface.

47. The system of claim 44, wherein:

said second air interface provides a PCS air interface.

20